

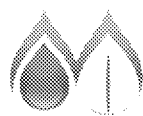
Prepared for:

LCP SITE STEERING COMMITTEE

SUPPLEMENTAL FIELD SAMPLING PLAN FOR OPERABLE UNIT 2: CELL BUILDING AREA SURFACE SOIL

LCP CHEMICALS SITE BRUNSWICK, GEORGIA

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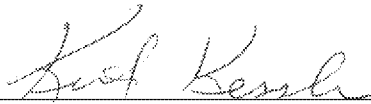
June 2021

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A handwritten signature in cursive script, appearing to read "Kirk Kessler", is positioned above a horizontal line.

Kirk Kessler, P.G.
Vice President of Remediation

June 2021

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FIGURE

Figure 1 Proposed Surface Soil Sampling Locations

APPENDIX

Appendix A Standard Operating Procedures

LSASDPROC-300-R4	Soil Sampling
SESDPROC-005-R3	Sample and Evidence Management
LSASDPROC-209-R4	Packing, Marking, Labeling, and Shipping of Environmental Waste Samples
LSASDPROC-205-R4	Field Equipment Cleaning and Decontamination
LSASDPROC-202-R4	Management of Investigation Derived Waste

Acronyms and Abbreviations

AOC	Administrative Order of Consent
ARCO	Atlantic Richfield Company
CBA	Cell Building Area
EPA	U.S. Environmental Protection Agency
ft	Feet
ft-bgs	Feet below ground surface (ft-bgs)
FSP	Field Sampling Plan
HASP	Health and Safety Plan
IDW	Investigation Derived Waste
LSASD	Laboratory Services and Applied Science Division
MS/MSD	Matrix spike/matrix spike duplicate
OU	Operable Unit
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
QA/QC	Quality assurance/quality control
QAPP	Quality Assurance Project Plan
RI/FS	Remedial Investigation and Feasibility Study
RP	Responsible Party
SFSP	Supplemental Field Sampling Plan
Site	LCP Chemicals Superfund Site
SOP	Standard Operating Procedure
TAL	Target Analyte List
VOC	Volatile Organic Compound

1 INTRODUCTION

1.1 Background

Honeywell and the Atlantic Richfield Company (ARCO) are Responsible Parties (RPs) to an Administrative Order of Consent (AOC) EPA Docket No.: 95-17-C with the U.S. Environmental Protection Agency (EPA), to conduct a Remedial Investigation and Feasibility Study (RI/FS) for the LCP Chemicals Superfund Site (the “Site”) located in Brunswick, Georgia (EPA, 1995). The EPA is administering the Site as three Operable Units (OUs): OU1 pertains to the salt marsh; OU2 pertains to site-wide groundwater and the footprint of the former mercury cell building area (CBA) (both soil and groundwater); and OU3 pertains to the upland soil excluding the CBA.

In August 2018, the RPs submitted a *Site Characterization Work Plan for Operable Unit 2: Groundwater and Cell Building Area, Revision 2* (EPS, 2018a) that presented the rationale and technical approach for additional characterization of the subsurface in the CBA and monitoring of Site-wide groundwater, and provided a framework for the completion of the OU2 RI/FS following the additional Site characterization. Complimentary plans to the *Site Characterization Work Plan* (EPS, 2018a) included: (1) a *Field Sampling Plan* (FSP) (EPS, 2018b), (2) a *Health and Safety Plan* (HASP) (EPS, 2018c), and (3) two *Quality Assurance Project Plans* (QAPP), one for the routine groundwater sampling scope of work (EPS, 2018d) and the second for the CBA scope of work (EPS, 2018e).

This *Supplemental Field Sampling Plan* (SFSP) has been prepared to support new field activities associated with the RI/FS process for OU2, specifically the work scope presented in the *Revised Supplemental Site Characterization Work Plan for Operable Unit 2: Cell Building Area Surface Soil* (the “Supplemental Work Plan”) (EPS, 2021a). This SFSP specifies procedures that will be followed to execute the Supplemental Work Plan and will be used in conjunction with the amended QAPP that provides updates applicable to the CBA surface soil sampling (EPS, 2021b).

1.2 Supplemental Field Sampling Plan Organization

The SFSP is organized as follows:

- Section 2 describes sample collection methods that will be followed while executing the work scope;
- Section 3 provides supporting protocols for sample collection including sample custody, equipment decontamination, and quality assurance/quality control (QA/QC); and
- Section 4 provides a list of references cited in this document.

2 FIELD SAMPLING PROCEDURES

2.1 Overview

The work scope outlined in the Supplemental Work Plan includes additional characterization of surface soils in the CBA. Samples will be collected per the procedures outlined in this section of the SFSP. The field sampling procedures presented in this section are generally consistent with standard operating procedures (SOPs) developed by the EPA Region 4 Laboratory Services and Applied Science Division (LSASD). Relevant SOPs are presented in Appendix A. Details regarding laboratory analytical methods are presented in the amended QAPP.

2.2 Surface Soil Sampling

Figure 1 depicts the proposed locations for additional surface soil characterization, which are positioned where the soil cover thickness is estimated at less than 2 feet (ft) thick. The targeted sampling within areas with 2 feet or less soil cover material provides a greater likelihood that sample collection includes native soil. Thus, the proposed locations are justifiably biased to areas of thin soil cover.

Soil from 0 to 2 ft below ground surface (ft-bgs) will be collected using a stainless-steel hand auger according to the procedures outlined in Section 3.2.2 and 4.3.1 of *Soil Sampling (LSASDPROC-300-R4)* developed by EPA (EPA, 2020a) and tested for volatile organic compounds (VOCs) (Method 8260C), polycyclic aromatic hydrocarbons (PAHs) (Method 8270D SIM), target analyte list (TAL) metals (Method 6020), mercury (Method 1631B), and polychlorinated biphenyl (PCB) Aroclors (Method 8082A). Soil for VOC analysis will be immediately transferred from the auger bucket to the sample container (40-mL pre-prepared vials) using a syringe (or EnCore® or equivalent sampling kit) to reduce volatilization losses. Soil for broader analytical testing will be homogenized prior to containerization, to ensure that samples adequately reflect site conditions.

3 SUPPORTING PROTOCOLS

3.1 Overview

The original FSP provided a list of supporting protocols pertinent to the sampling related to the OU2 RI/FS, comprising: (1) sample handling, (2) sampling labeling, shipping, and custody procedures, (3) logbooks, (4) health and safety, (5) equipment decontamination, (6) QA/QC, and (7) investigation-derived waste (IDW) management. Section 3 updates certain supporting protocols based on the latest requirements from EPA Region 4 LSASD. All Site activities associated with the SFSP will follow the procedures outlined in the original site-specific HASP (EPS, 2018c).

3.2 Sample Labeling, Shipping, and Custody Procedures

Sample labeling, storage, and chain of custody will be performed in accordance with the procedures specified in *Packing, Marking, Labeling, and Shipping of Environmental and Waste Samples (LSASDPROC-209-R4)* and *Sample and Evidence Management (SES DPROC-005-R3)* developed by the EPA Region 4 LSASD (EPA, 2020b; EPA 2016).

3.3 Equipment Decontamination

Hand auger equipment used to collect samples for laboratory analysis will require decontamination between samples to assure sample integrity. Decontamination will be performed according to *Field Equipment Cleaning and Decontamination (LSASDPROC-205-R4)* developed by the EPA Region 4 LSASD (EPA, 2020c).

3.4 Quality Assurance/Quality Control

Blind duplicates and matrix spikes/matrix spike duplicates (MS/MSDs) will be collected at a 10% frequency (*i.e.*, 1 per 10 field samples) to allow for evaluation of data quality. Details regarding the collection and analysis of these samples, as well as procedures for evaluation of QA/QC data, are presented in the amended QAPP (EPS, 2021b). Additionally, one equipment blank sample will be collected to verify the efficiency of the decontamination procedures and one trip blank will be included for each shipping container that includes one or more VOC samples.

3.5 IDW Management

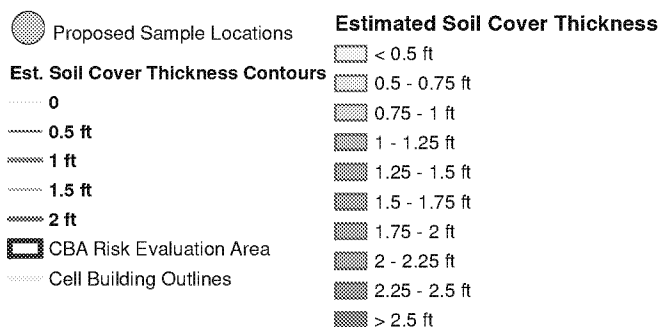
IDW will be managed according to *Management of Investigation Derived Waste (LSASDPROC-202-R4)* developed by the EPA Region 4 LSASD (EPA, 2020d). IDW may include soil cuttings, debris (*i.e.*, concrete, stone, demolition debris, etc.), and wastewater (*i.e.*, decontamination fluids

and purge water). These waste streams will be segregated and containerized at the point of generation according to the packaging requirements of the Department of Transportation. The IDW will be sampled as necessary to generate a waste profile and shipped off-site to the appropriate facility for treatment/disposal. Soil and debris containing visible metallic mercury will be assumed hazardous for mercury and segregated from the other IDW.

4 REFERENCES

- [EPA] U.S. Environmental Protection Agency (1995). Administrative Order by Consent for Remedial Investigation/Feasibility Study. Docket N.95-17-C
- EPA (2016). *Sample and Evidence Management (SESDPROC-005-R3)*. Dated May 25, 2016.
- EPA (2020a). *Soil Sampling (LSASDPROC-300-R4)*. Dated June 11, 2020.
- EPA (2020b). *Packing, Marking, Labeling, and Shipping of Environmental and Waste Samples (LSASDPROC-209-R4)*. Dated February 23, 2020.
- EPA (2020c). *Field Equipment Cleaning and Decontamination (LSASDPROC-205-R4)*. Dated June 22, 2020.
- EPA (2020d). *Management of Investigation Derived Waste (LSASDPROC-202-R4)*. Dated May 8, 2020.
- [EPS] Environmental Planning Specialists, Inc., 2018a. *Site Characterization Work Plan for Operable Unit 2: Groundwater and Cell Building Area, LCP Chemicals Site. Revision 2*. August.
- EPS, 2018b. *Field Sampling Plan for Operable Unit 2: Groundwater and Cell Building Area. Revision 1*. July.
- EPS, 2018c. *Health and Safety Plan for Operable Unit 2: Groundwater and Cell Building Area. Revision 1*. July.
- EPS, 2018d. *Quality Assurance Project Plan for Operable Unit 2: 2018 Groundwater Sampling. Revision 1*. July.
- EPS, 2018e. *Quality Assurance Project Plan for Operable Unit 2: Cell Building Area Site Characterization. Revision 2*. August.
- EPS, 2021a. *Revised Supplemental Site Characterization Work Plan for Operable Unit 2: Cell Building Area Surface Soil, LCP Chemicals Site. Revision 2*. June.
- EPS, 2021b. Amendment #1: *Quality Assurance Project Plan for Operable Unit 2: Cell Building Surface Soil. Revision 1*. June.

FIGURES



Proposed Surface Soil Sample Locations **LCP Chemicals Site** **Brunswick, GA**